

# Air Quality PERMIT TO CONSTRUCT State of Idaho

**Department of Environmental Quality** 

**PERMIT No.:** P-2008.0093

**FACILITY ID No.:** 053-00018

AQCR: 63 CLASS: SM

**SIC:** 4911 **ZONE:** 11

**UTM COORDINATE (km):** 706.751, 4,747.343

#### 1. PERMITTEE

DF-AP #3, LLC

#### 2. PROJECT

Initial Permit to Construct – dairy anaerobic digester and generators

3. MAILING ADDRESS	CITY	STATE	ZIP	
P.O. Box 2708	Ferndale	WA	98248	
4. FACILITY CONTACT	TITLE	TELEPHONE		
Marlin Statema	Manager	(360) 392-8938		
5. RESPONSIBLE OFFICIAL	TITLE	TELEPHONE		
Marlin Statema	Manager	(360) 392-8938		
6. EXACT PLANT LOCATION	COUNTY			
Double A Dairy, 305 County Line Rd., Jeron	Jerome			

#### 7. GENERAL NATURE OF BUSINESS & KINDS OF PRODUCTS

Anaerobic digester renewable energy system using biogas-fired IC engines to generate electricity.

#### 8. PERMIT AUTHORITY

This permit is issued according to the Rules for the Control of Air Pollution in Idaho, IDAPA 58.01.01.200 through 228, and pertains only to emissions of air contaminants regulated by the state of Idaho and to the sources specifically allowed to be constructed or modified by this permit.

This permit (a) does not affect the title of the premises upon which the equipment is to be located; (b) does not release the permittee from any liability for any loss due to damage to person or property caused by, resulting from, or arising out of the design, installation, maintenance, or operation of the proposed equipment; (c) does not release the permittee from compliance with other applicable federal, state, tribal, or local laws, regulations, or ordinances; (d) in no manner implies or suggests that the Department of Environmental Quality (DEQ) or its officers, agents, or employees, assume any liability, directly or indirectly, for any loss due to damage to person or property caused by, resulting from, or arising out of design, installation, maintenance, or operation of the proposed equipment.

This permit will expire if construction has not begun within two years of its issue date or if construction is suspended for one year.

This permit has been granted on the basis of design information presented with its application. Changes in design, equipment or operations may be considered a modification. Modifications are subject to DEQ review in accordance with IDAPA 58.01.01.200 through 228 of the Rules for the Control of Air Pollution in Idaho.

DARRIN PAMPAIAN, PERMIT WRITER	
DEPARTMENT OF ENVIRONMENTAL QUALITY	

DATE MODIFIED/REVISED:	
DATE ISSUED:	October XX, 2008

MIKE SIMON, STATIONARY SOURCE PROGRAM MANAGER DEPARTMENT OF ENVIRONMENTAL QUALITY

MS/DP/hp Permit No. P-2008.0093

## **Table of Contents**

ACRO	NYMS, UNITS, AND CHEMICAL NOMENCLATURE	3
1.	PERMIT TO CONSTRUCT SCOPE	4
2.	ANAEROBIC DIGESTER, H <sub>2</sub> S BIO-SCRUBBER, BIOGAS-FIRED IC ENGINES, AND FLARE	5
3.	PERMIT TO CONSTRUCT GENERAL PROVISIONS	14

## Acronyms, Units, and Chemical Nomenclature

AFS AIRS Facility Subsystem

AIRS Aerometric Information Retrieval System

AQCR Air Quality Control Region

bhp brake horsepower

biogas any gas fuel derived from the decay of organic matter, as the mixture of methane and carbon

dioxide produced by the bacterial decomposition of sewage, manure, garbage, or plant crop

Btu British thermal unit CAA Clean Air Act

CFR Code of Federal Regulations

CO carbon monoxide

DEQ Department of Environmental Quality

dscf dry standard cubic feet

EPA U.S. Environmental Protection Agency

gpm gallons per minute

 $\begin{array}{ll} gr & grain \ (1\ lb = 7,000\ grains) \\ H_2S & hydrogen\ sulfide\ gas \\ HAPs & hazardous\ air\ pollutants \end{array}$ 

IDAPA a numbering designation for all administrative rules in Idaho promulgated in accordance with

the Idaho Administrative Procedures Act

km kilometer
lb/hr pound per hour
m meter(s)

MMBtu million British thermal units

NESHAP Nation Emission Standards for Hazardous Air Pollutants

NO<sub>2</sub> nitrogen dioxide NO<sub>x</sub> nitrogen oxides

NSPS New Source Performance Standards

PM particulate matter

PM<sub>10</sub> particulate matter with an aerodynamic diameter less than or equal to a nominal 10

micrometers

ppmv parts per million, volume

PSD Prevention of Significant Deterioration

PTC permit to construct
PTE potential to emit
scf standard cubic feet

SIC Standard Industrial Classification SIP State Implementation Plan

 $\begin{array}{ccc} SM & synthetic minor \\ SO_2 & sulfur dioxide \\ SO_x & sulfur oxides \\ T/yr & tons per year \end{array}$ 

μg/m³ micrograms per cubic meter
UTM Universal Transverse Mercator
VOC volatile organic compound

AIR QUALITY PERMIT TO CONSTRUCT NUMBER: P-2008.0093				
Permittee:	DF-AP#3 – Double A Dairy	Facility ID No. 053-00018		
<b>Location:</b>	Jerome, Idaho	Facility 1D 140. 033-00018		

## 1. PERMIT TO CONSTRUCT SCOPE

## **Purpose**

**1.1.** The purpose for this memorandum is to satisfy the requirements of IDAPA 58.01.01.200, Rules for the Control of Air Pollution in Idaho, for issuing permits to construct.

## Regulated Sources

1.2 Table 1.1 lists all sources of regulated emissions in this PTC.

## **Table 1.1 SUMMARY OF REGULATED SOURCES**

Permit Section	Source Description	Emissions Control(s)
2.	ANAEROBIC DIGESTER: Digester - 11.00 million gallon capacity anaerobic digester with a generation capacity of 1,754,640 scf/day	Six spark-ignited lean-burn IC engines or the flare when the IC engines are down
2.	H <sub>2</sub> S BIO-SCRUBBER: Bio-Scrubber - Gen-Tec H <sub>2</sub> S biogas scrubbing system	N/A
	BIOGAS-FIRED IC ENGINE 1: Guascor 560 - Guascor model #SFGLD 560 natural gas-fired leanburn IC engine rated at 1,057 bhp and a rated electrical generation capacity of 750 kW	Lean-burn combustion technology
	BIOGAS-FIRED IC ENGINE 2: Guascor 560 - Guascor model #SFGLD 560 natural gas-fired leanburn IC engine rated at 1,057 bhp and a rated electrical generation capacity of 750 kW	Lean-burn combustion technology
	BIOGAS-FIRED IC ENGINE 3: Guascor 560 - Guascor model #SFGLD 560 natural gas-fired leanburn IC engine rated at 1,057 bhp and a rated electrical generation capacity of 750 kW	Lean-burn combustion technology
2.	BIOGAS-FIRED IC ENGINE 4: Guascor 560 - Guascor model #SFGLD 560 natural gas-fired leanburn IC engine rated at 1,057 bhp and a rated electrical generation capacity of 750 kW	Lean-burn combustion technology
	BIOGAS-FIRED IC ENGINE 5: Guascor 560 - Guascor model #SFGLD 560 natural gas-fired leanburn IC engine rated at 1,057 bhp and a rated electrical generation capacity of 750 kW	Lean-burn combustion technology
	BIOGAS-FIRED IC ENGINE 6: Guascor 560 - Guascor model #SFGLD 560 natural gas-fired leanburn IC engine rated at 1,057 bhp and a rated electrical generation capacity of 750 kW	Lean-burn combustion technology
2.	BIOGAS-FIRED FLARE: Flare - Andgar flare with a heat input rating of 41.256 MMBtu/hr	N/A

AIR QUALITY PERMIT TO CONSTRUCT NUMBER: P-2008.0093				
Permittee:	DF-AP#3 – Double A Dairy	Facility ID No. 053-00018		
<b>Location:</b>	Jerome, Idaho	Facinty 1D 140, 033-00018		

## 2. ANAEROBIC DIGESTER, H₂S BIO-SCRUBBER, BIOGAS-FIRED IC ENGINES, AND FLARE

#### 2.1 Process Description

An anaerobic digester is used to produce biogas from on-site dairy cattle manure. The resulting biogas is passed through a bio-scrubber to decrease the concentration of  $H_2S$  in the gas stream. The biogas is then combusted in six reciprocating IC engines or a flare. The six reciprocating IC engines are used to power electrical generators. During emergencies and routine maintenance the IC engines are taken offline and the excess biogas is combusted in the flare.

## **Emissions Control Description**

**Table 2.1 ANAEROBIC DIGESTER DESCRIPTION** 

Emissions Unit(s)/Process(es)	Emissions Control Device(s)	Emissions Point(s)
Anaerobic digester (DIGESTER)	Bio-scrubber, six IC engines, and a flare	N/A
IC Engines (IC-1 thru IC-6)	N/A	Exhaust stacks EP-1 thru EP-6
Emergency Flare (FLARE)	N/A	Exhaust stack FLARE

## **Emissions Limits**

## 2.3 Emissions Limits

The  $PM_{10}$ ,  $SO_2$ ,  $NO_x$ , CO, and VOC emissions from the six biogas-fired IC engines and the flare stacks shall not exceed any corresponding emissions rate limits listed in Table 2.2.

Table 2.2 BIOGAS-FIRED IC ENGINE EMISSIONS LIMITS

Source	$PM_{10}$		S	$SO_2$		NO <sub>x</sub>		CO		VOC	
Description	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	
IC Engine (IC-1)	0.07	0.30	0.51	2.25	2.32	10.18	3.73	16.32	2.32	10.18	
IC Engine (IC-2)	0.07	0.30	0.51	2.25	2.32	10.18	3.73	16.32	2.32	10.18	
IC Engine (IC-3)	0.07	0.30	0.51	2.25	2.32	10.18	3.73	16.32	2.32	10.18	
IC Engine (IC-4)	0.07	0.30	0.51	2.25	2.32	10.18	3.73	16.32	2.32	10.18	
IC Engine (IC-5)	0.07	0.30	0.51	2.25	2.32	10.18	3.73	16.32	2.32	10.18	
IC Engine (IC-6)	0.07	0.30	0.51	2.25	2.32	10.18	3.73	16.32	2.32	10.18	
Flare (FLARE) <sup>2</sup>	0.31	1.36	3.08	13.50	4.13	18.07	8.25	36.14	14.85	65.05	

## 2.4 <u>H<sub>2</sub>S Concentration Limit</u>

The average annual concentration of hydrogen sulfide  $(H_2S)$  of the biogas entering the IC engines and the flare shall not exceed 250 ppmv.

### 2.5 Biogas Production Limit

Biogas production from the anaerobic digester shall not exceed 1,754,640 scf per day, based on the average scf produced per day over any consecutive 12-month period.

AIR QUALITY PERMIT TO CONSTRUCT NUMBER: P-2008.0093					
Permittee:	DF-AP#3 – Double A Dairy	Facility ID No. 052 00019			
<b>Location:</b>	Jerome, Idaho	Facility ID No. 053-00018			

## 2.6 NO<sub>x</sub> Emissions Limit

NO<sub>x</sub> emissions from the IC engines shall not exceed 1.0 grams/bhp-hr based upon the source testing requirements of Permit Conditions 2.24 and 2.25.

#### 2.7 CO Emissions Limit

CO emissions from the IC engines shall not exceed 1.6 grams/bhp-hr based upon the source testing requirements of Permit Conditions 2.24 and 2.25.

## 2.8 **Opacity Limit**

Visible emissions from the IC engines and flare stacks, or any other stack, vent, or functionally equivalent opening associated with the IC engines or flare, shall not exceed 20% opacity for a period or periods aggregating more than three minutes in any 60-minute period as required by IDAPA 58.01.01.625. Opacity shall be determined by the procedures contained in IDAPA 58.01.01.625.

## 2.9 Odors

The permittee shall not allow, suffer, cause, or permit the emission of odorous gasses, liquids, or solids to the atmosphere in such quantities as to cause air pollution in accordance with IDAPA 58.01.01.776.01.

## 2.10 <u>40 CFR 60, Subpart JJJJ – Emission Standards for Owners and Operators of Stationary Spark Ignition Internal Combustion Engines</u>

In accordance with 40 CFR 60.4233(e) and Table 1 of 40 CFR 60, Subpart JJJJ, the permittee shall comply with the following emission standards for IC engines firing on digester gas:

Table 2.3 40 CFR 60, SUBPART JJJJ, TABLE 1 SUMMARY

	Maximum Engine	Manufacture	Emission Standards <sup>1</sup>					
Engine Type and Fuel	Horsepower	Date	g/bhp-hr			ppmvd at 15% O <sub>2</sub>		
	(bhp)		$NO_x$	CO	$VOC^2$	$NO_x$	CO	$VOC^2$
Lean Burn Digester Gas Fired	500≥ BHP <1,350	1/1/2008	3.0	5.0	1.0	220	610	80

<sup>&</sup>lt;sup>1</sup> – .. Owners and operators of stationary non-certified spark ignited IC engines may choose to comply with the emission standards in units of either g/bhp-hr or ppmvd at 15% O<sub>2</sub>.

## **Operating Requirements**

## 2.11 <u>40 CFR 60, Subpart JJJJ – Emission Standards for Owners and Operators of Stationary Spark Ignition Internal Combustion Engines</u>

Owners and operators must operate and maintain the engines that achieve these standards over the life of the engine in accordance with 40 CFR 60.4234.

<sup>&</sup>lt;sup>2</sup> - .. When calculating emissions of volatile organic compounds, emission of formaldehyde should not be included.

AIR QUALITY PERMIT TO CONSTRUCT NUMBER: P-2008.0093				
Permittee:	DF-AP#3 – Double A Dairy	Facility ID No. 053-00018		
<b>Location:</b>	Jerome, Idaho	Facility 1D 140. 033-00018		

#### 2.12 Biogas Combustion

Facility generated biogas produced from the on-site anaerobic digester shall only be combusted in IC Engine No. 1 and/or IC Engine No.2 and/or IC Engine No.3 and/or IC Engine No.4 and/or IC Engine No.5 and/or IC Engine No.6 or the flare. The biogas shall not be combusted simultaneously in the IC engines and the flare.

## 2.13 Flare Pilot Flame

Prior to initial biogas production, the permittee shall install, maintain, and operate a flare that shall be operated with a pilot flame present during the operation of the anaerobic digester. In the event of a pilot flame failure, the permittee shall follow a standard operating procedure to reignite the pilot flame as quickly as possible.

## 2.14 Bio-Scrubber Operating Parameters

The permittee shall maintain and operate the bio-scrubber as follows:

- Within a influent gas temperature range of 80 °F to 120 °F,
- Within a nutrient temperature range of 60 °F to 100 °F,
- Within a nutrient flow rate of 3 gpm to 5 gpm, and
- Within a nutrient pH range of 7 to 8.

## 2.15 Bio-Scrubber Maintenance Requirements

The permittee shall maintain the influent gas thermometer, nutrient temperature thermometer, nutrient flow meters, and the nutrient pH meter on the bio-scrubber in accordance with the manufacturer's written instructions.

#### 2.16 Bio-Scrubber Inspection and Repair Requirements

At least once each calendar year the bio-scrubber shall be inspected for physical degradation that could affect the performance of the bio-scrubber, including but not limited to any individual spray nozzles that are plugged, missing, or damaged to the extent that they are no longer effective.

## Monitoring and Recordkeeping Requirements

### 2.17 Pilot Flame Monitoring

Prior to initial biogas production, the permittee shall install, maintain, and operate a thermocouple or similar device that detects the presence of a pilot flame in the biogas flare.

### 2.18 Fuel Consumption Monitoring and Record Keeping

The permittee shall monitor and record the amount of biogas combusted by the IC engines and the flare on a monthly basis. Each monthly amount of biogas combusted shall also be summed over the previous consecutive 12-month period. The amount of biogas combusted shall be recorded in units of million standard cubic feet per month (MMscf/month) and MMscf per consecutive 12-month period (MMscf/yr). Records of this information shall be maintained in accordance with General Provision 7.

AIR QUALITY PERMIT TO CONSTRUCT NUMBER: P-2008.0093		
Permittee:	DF-AP#3 – Double A Dairy	Facility ID No. 053-00018
<b>Location:</b>	Jerome, Idaho	Facility 1D 140. 033-00016

## 2.19 Biogas Flow Rate Monitoring

Unless an alternative monitoring and recordkeeping method is approved by DEQ, the permittee shall comply with the following requirements to determine the quantity of biogas produced by the anaerobic digester:

- Within 60 days of the initial startup of the anaerobic digester, the permittee shall install, calibrate, maintain, and operate a biogas flow meter that shall be placed at the outlet of the covered anaerobic digester, in order to determine the total quantity of biogas produced by the digester. The biogas flow meter shall be installed, operated, and maintained in accordance with the O&M manual and the manufacturer specifications.
- Calibration of the biogas flow meter shall be performed and recorded in accordance with the O&M manual.
- The permittee shall monitor and record the total biogas flow rate on a monthly basis, in units of MMscf/month. Records of this information shall be maintained in accordance with General Provision 7.

## 2.20 Biogas H<sub>2</sub>S Concentration Monitoring

Unless an alternative monitoring and recordkeeping method is approved by DEQ, the permittee shall comply with the following requirements to determine the concentration of H<sub>2</sub>S in the gas stream produced by the anaerobic digester:

- Within 120 days of initial startup of the anaerobic digester, the permittee shall install, calibrate, maintain, and operate an H<sub>2</sub>S gas concentration monitor that shall be placed downstream of the digester and the bio-scrubber, and upstream of the IC engines and the flare, to measure the H<sub>2</sub>S concentration of the biogas. The monitor shall be installed in accordance with the O&M manual and the manufacturer specifications.
- Calibration of the H<sub>2</sub>S concentration monitor shall be performed no less frequently than semiannually and recorded in accordance with the O&M manual.
- The H<sub>2</sub>S concentrations from the monitor shall be recorded once per week.
- Monitoring and recordkeeping of H<sub>2</sub>S concentrations shall occur weekly during operation of the digester. Monthly monitoring may be conducted in lieu of weekly monitoring, provided that 24 consecutive weeks of monitoring show that the measured H<sub>2</sub>S concentration does not equal or exceed 90% of the limit of Permit Condition 2.4. If any measured H<sub>2</sub>S concentration during monthly monitoring equals or exceeds 90% of the limit of Permit Condition 2.4, then the monitoring frequency shall revert to weekly until 24 consecutive weeks of monitoring do not equal or exceed 90% of the of Permit Condition 2.4. Records of this information shall be maintained on site and be made available to DEQ representatives upon request and in accordance with General Provision 7.

#### 2.21 Operations and Maintenance Manual

Within 60 days of permit issuance, the permittee shall have developed and submitted to DEQ an Operations and Maintenance (O&M) manual for the anaerobic digester, the bio-scrubber, the IC engines No.1, No.2, No. 3, No. 4, No. 5, and No.6, and the flare which describes the procedures that will be followed to comply with General Provision 2 of this permit and the manufacturer's specifications for each piece of equipment. At a minimum, the following shall be included in the O&M manual:

AIR QUALITY PERMIT TO CONSTRUCT NUMBER: P-2008.0093		
Permittee:	DF-AP#3 – Double A Dairy	Facility ID No. 053-00018
<b>Location:</b>	Jerome, Idaho	<b>Facility ID 140.</b> 033-00018

## • Biogas Flow Rate Meter

- o Standard operational procedure for flow-rate sampling,
- o Frequency and method of calibration,
- o Operational maintenance plan,
- o Procedures for upset/breakdown conditions and for correcting equipment malfunctions, and
- o Maximum flow rate.

#### • H<sub>2</sub>S Concentration Monitor

- o Standard operational procedure for H<sub>2</sub>S concentration sampling,
- o Frequency and method of calibration,
- o Operational maintenance plan,
- o Procedures for upset/breakdown conditions and for correcting equipment malfunctions, and
- o Maximum H<sub>2</sub>S concentration.

#### Bio-Scrubber

- Standard operational procedures for influent gas temperature monitoring, nutrient temperature range monitoring, nutrient flow rate monitoring, and nutrient pH sampling,
- Frequency and method of calibration,
- o Operational maintenance plan, and
- o Procedures for upset/breakdown conditions and for correcting equipment malfunctions.

### • Pilot Flame Detector

- o Method of ensuring continuous operation,
- Operational maintenance,
- o Procedure for pilot flame reignition, and
- o Procedures for upset/breakdown conditions and for correcting equipment malfunctions.

Requirements to periodically monitor and record the parameters listed above no less frequently than once per calendar month.

All records shall be maintained on-site for a period of 5 years, shall be made available to DEQ representatives upon request, and shall be maintained in accordance with General Provision 7.

The contents of the O&M manual shall be based on manufacturer's specifications for each piece of equipment. A copy of the manufacturer's recommendations shall be included with the O & M manual, and both shall be made available to DEQ representatives upon request.

The O&M manual shall be submitted to DEQ within 60 days of permit issuance and shall contain a certification by a responsible official. Any changes to the O&M Manual shall be submitted within 15 days of the change.

AIR QUALITY PERMIT TO CONSTRUCT NUMBER: P-2008.0093		
Permittee:	DF-AP#3 – Double A Dairy	Facility ID No. 053-00018
<b>Location:</b>	Jerome, Idaho	Facility 1D 140. 033-00018

The operation and monitoring requirements specified in the O&M manual are incorporated by reference to this permit and are enforceable permit conditions.

## 2.22 Alternative Operating Parameters

As an alternative to the manufacturer's operating parameters for the anaerobic digester, the bioscrubber, the IC engines No.1, No.2, No. 3, No. 4, No. 5, and No.6, and the flare the permittee may establish new operating parameters by conducting a performance test that demonstrates compliance with Permit Condition 2.4 while operating at the alternative operating parameters. The performance test shall be conducted in accordance with the Test Methods and Procedures specified in the Rules (IDAPA 58.01.01.157) and in accordance with a DEQ approved source test protocol. All operating parameters specified in this permit condition shall be continuously monitored and recorded during each test run. The permittee may request to operate outside of the operating parameters specified by the manufacturer during the performance test by submitting a written source protocol to DEO for approval and requesting to operate under alternative operating parameters during the duration of the test. The protocol shall describe how the operating parameters will be monitored during the performance test. Once the source test is completed the permittee may request in writing to operate in accordance with alternative operating parameters. The request shall include a source test report and justification for the alternative operating parameters. Upon receiving DEO written approval of the source test and the requested alternative operating parameters, the permittee shall operate in accordance with those DEQ approved alternative operating parameters. A copy of DEQ's approval shall be maintained on site with a copy of this permit.

#### 2.23 Manufacturer's Recommendations and Specifications for Operation of the IC Engines

The permittee shall operate and maintain IC engines No.1, No.2, No. 3, No. 4, No. 5, and No.6 to manufacturer's recommendations and specifications at all times and shall make the manufacturer's recommendations and specifications available to DEQ representatives upon request. A copy of the documentation shall be submitted to DEQ's Twin Falls Regional Office at the address provided in Table 2.4

## 2.24 Visible Emissions Monitoring

The permittee shall conduct a monthly facility-wide inspection of potential sources of visible emissions, during daylight hours and under normal operating conditions. The visible emissions inspection shall consist of a see/no see evaluation for each potential source. If any visible emissions are present from any point of emission, the permittee shall either take appropriate corrective action as expeditiously as practicable, or perform a Method 9 opacity test in accordance with the procedures outlined in IDAPA 58.01.01.625. A minimum of 30 observations shall be recorded when conducting the opacity test. If opacity is greater than 20% for a period or periods aggregating more than three minutes in any 60-minute period, the permittee shall take all necessary corrective action and report the exceedance in accordance with IDAPA 58.01.01.130-136. The permittee shall maintain records of the results of each visible emissions inspection and each opacity test when conducted. The records shall include, at a minimum, the date and results of each inspection and test and a description of the following: the permittee's assessment of the conditions existing at the time visible emissions are present (if observed), any corrective action taken in response to the visible emissions, and the date corrective action was taken.

AIR QUALITY PERMIT TO CONSTRUCT NUMBER: P-2008.0093		
Permittee:	DF-AP#3 – Double A Dairy	Facility ID No. 053-00018
<b>Location:</b>	Jerome, Idaho	Facility 1D 140. 033-00016

## 2.25 Odor Complaints

The permittee shall maintain records of all odor complaints received to demonstrate compliance with Permit Condition 2.9. The permittee shall take appropriate corrective action as expeditiously as practicable. The records shall include, at a minimum, the date each complaint was received and a description of the following: the complaint, the permittee's assessment of the validity of the complaint, any corrective action taken, and the date the corrective action was taken.

[DRAFT]

## 2.26 <u>40 CFR 60.4243, Subpart JJJJ – Compliance Requirements for Owners and Operators of Stationary Spark Ignition Internal Combustion Engines</u>

The permittee shall comply with the compliance requirements for owners and operators per 40 CFR 60.4243 as follows:

- Keep a maintenance plan and records of conducted maintenance and, to the extent practicable, maintain and operate the engines in a manner consistent with good air pollution practices for minimizing emissions in accordance with 40 CFR 60.4243(b)(2)(ii).
- Conduct a performance test within 60 days of initial IC engine operation and conduct subsequent performance testing every 8,760 hours of each IC engine's operation or every 3-years, whichever comes first, in accordance with 40 CFR 60.4243(b)(2)(ii).

## 2.27 <u>40 CFR 60.4243, Subpart JJJJ – Testing Requirements for Owners and Operators of Stationary Spark Ignition Internal Combustion Engines</u>

The permittee shall comply with all applicable performance test standards of 40 CFR 60.4244 as follows:

- Performance tests shall be conducted within 10% of the highest achievable load in accordance with 40 CFR 60.4244(a).
- Performance tests shall not be conducted during periods of start-up, shut down, or malfunction in accordance with 40 CFR 60.4244(b).
- Three separate test runs shall be conducted within 10% of the highest achievable load and last at least 1-hour in accordance with 40 CFR 60.4244(c).
- Compliance with the NO<sub>x</sub>, CO, and VOC standards of 40 CFR 60.4234 shall be demonstrated in accordance with the calculations provided in 40 CFR 60.4244(e) through 40 CFR 60.4244(f) and 40 CFR 60, Subpart JJJJ, Table 2.

## Reporting Requirements

## 2.28 <u>40 CFR 60.4245, Subpart JJJJ – Notification, Reports, and Records Requirements for Owners</u> and Operators of Stationary Spark Ignition Internal Combustion Engines

The permittee shall comply with all applicable standards for notification, reports, and records per 40 CFR 60.4245 as follows:

• Submit all notifications and all supporting documentation to the addressees provided in Table 2.4 and in accordance with 40 CFR 60.4245(a)(1).

AIR QUALITY PERMIT TO CONSTRUCT NUMBER: P-2008.0093		
Permittee:	DF-AP#3 – Double A Dairy	Facility ID No. 053-00018
<b>Location:</b>	Jerome, Idaho	Facility 1D 140. 033-00016

- Keep records of maintenance conducted on the engines in accordance with 40 CFR 60.4245(a)(2).
- Submit an initial notification to the addressees provided in Table 2.4 in accordance with 40 CFR 60.4245(c). The notification shall contain the following information:
  - o Name and address of the owner or operator,
  - o The address of the affected sources,
  - o Engine information including make, model, engine family, serial number, model year, maximum engine brake horsepower, and engine displacement,
  - o Emission control equipment, and
  - o Fuel used
- Submit results of the performance tests within 60-days after the performance test was conducted in accordance with 40 CFR 60.4245(d). Results shall be sent to the addressees provided in Table 2.4.

## 2.29 NSPS 40 CFR 60 Subpart A –General Provisions

Generally applicable requirements of Subpart A of the New Source Performance Standards (NSPS, 40 CFR 60) are summarized in Table 2.4. These summaries are provided to aid the permittee in understanding the general requirements and to highlight the notification and record keeping requirements of 40 CFR 60 for affected facilities. These summaries do not relieve the permittee from the responsibility to comply with all applicable requirements of the CFR, and they are not intended to be a comprehensive listing of all requirements that may apply.

AIR QUALITY PERMIT TO CONSTRUCT NUMBER: P-2008.0093		
Permittee:	DF-AP#3 – Double A Dairy	<b>Facility ID No.</b> 053-00018
<b>Location:</b>	Jerome, Idaho	Facility 1D 140, 033-00016

## Table 2.4 NSPS SUBPART A (40 CFR 60.1) SUMMARY OF GENERAL PROVISIONS FOR AFFECTED FACILITIES

Section	Section Title	Summary of Section	
60.4	Address	All notifications and reports shall be submitted to:  Director Air and Waste US EPA 1200 Sixth Avenue Seattle, WA 98101  And Twin Falls Regional Office 1363 Fillmore Street Twin Falls, ID 83301	
60.7(b),(c)(d) and (f)	Notification and Record Keeping	<ul> <li>Notification of construction postmarked no later than 30 days of such date.</li> <li>Notification of startup postmarked within 15 days of such date.</li> <li>Notification of physical or operational change that may increase emissions postmarked 60 days before the change is made.</li> <li>Maintain records of the occurrence and duration of any: startup, shutdown or malfunction of the affected source; malfunction of air pollution control device; and any period when a continuous monitoring system or monitoring device is inoperative.</li> <li>For affected units with continuous monitoring device requirements, report excess emissions and monitoring system performance semiannually, postmarked by January 30<sup>th</sup> and July 30<sup>th</sup> (in the format required by NSPS).</li> <li>Maintain in a permanent form records suitable for inspection all measurements, system testing, performance measurements, calibration checks, adjustments and maintenance performed. Records shall be maintained for a period of two years from the date the record is required to be generated by the applicable regulation.</li> </ul>	
60.11(a),(b),(c), (d) and (g)	Compliance with Standards and Maintenance Requirements	<ul> <li>Other than opacity standards, where performance tests are required compliance with standards is determined by methods and procedures established by 40 CFR 60.8.</li> <li>Compliance with opacity standards shall be determined by Method 9 of Appendix A. The owner or operator may elect to use COM measurements in lieu of Method 9, provided notification is made at least 30 days before the performance test.</li> <li>At all times, including periods of startup, shutdown, and malfunction to the extent practicable, the operator shall maintain and operate any affected facility and air pollution control equipment consistent with good air pollution control practices.</li> <li>For the purposes of determining compliance with standards, any creditable evidence may be used if the appropriate performance or compliance test procedure has been performed.</li> </ul>	
60.12	Circumvention	No owner or operator shall build, erect, install, or use any article or method, including dilution, to conceal an emission which would otherwise constitute a violation.	

AIR QUALITY PERMIT TO CONSTRUCT NUMBER: P-2008.0093		
Permittee:	DF-AP#3 – Double A Dairy	Facility ID No. 053-00018
<b>Location:</b>	Jerome, Idaho	Facility 1D 110, 033-00018

## 3. PERMIT TO CONSTRUCT GENERAL PROVISIONS

## General Compliance

1. The permittee has a continuing duty to comply with all terms and conditions of this permit. All emissions authorized herein shall be consistent with the terms and conditions of this permit and the Rules for the Control of Air Pollution in Idaho. The emissions of any pollutant in excess of the limitations specified herein, or noncompliance with any other condition or limitation contained in this permit, shall constitute a violation of this permit and the Rules for the Control of Air Pollution in Idaho, and the Environmental Protection and Health Act, Idaho Code §39-101, et seq.

[Idaho Code §39-101, et seq.]

2. The permittee shall at all times (except as provided in the Rules for the Control of Air Pollution in Idaho) maintain in good working order and operate as efficiently as practicable, all treatment or control facilities or systems installed or used to achieve compliance with the terms and conditions of this permit and other applicable Idaho laws for the control of air pollution.

[IDAPA 58.01.01.211, 5/1/94]

3. Nothing in this permit is intended to relieve or exempt the permittee from the responsibility to comply with all applicable local, state, or federal statutes, rules and regulations.

[IDAPA 58.01.01.212.01, 5/1/94]

## Inspection and Entry

- 4. Upon presentation of credentials, the permittee shall allow DEQ or an authorized representative of DEQ to do the following:
  - a. Enter upon the permittee's premises where an emissions source is located or emissions related activity is conducted, or where records are kept under conditions of this permit;
  - b. Have access to and copy, at reasonable times, any records that are kept under the conditions of this permit;
  - c. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit; and
  - d. As authorized by the Idaho Environmental Protection and Health Act, sample or monitor, at reasonable times, substances or parameters for the purpose of determining or ensuring compliance with this permit or applicable requirements.

[Idaho Code §39-108]

## **Construction and Operation Notification**

- 5. The permittee shall furnish DEQ written notifications as follows in accordance with IDAPA 58.01.01.211:
  - a. A notification of the date of initiation of construction, within five working days after occurrence;
  - b. A notification of the date of any suspension of construction, if such suspension lasts for one year or more;

AIR QUALITY PERMIT TO CONSTRUCT NUMBER: P-2008.0093		
Permittee:	DF-AP#3 – Double A Dairy	Facility ID No. 053-00018
<b>Location:</b>	Jerome, Idaho	Facility 1D 140. 033-00018

- c. A notification of the anticipated date of initial start-up of the stationary source or facility not more than sixty days or less than thirty days prior to such date;
- d. A notification of the actual date of initial start-up of the stationary source or facility within fifteen days after such date; and
- e. A notification of the initial date of achieving the maximum production rate, within five working days after occurrence production rate and date.

[IDAPA 58.01.01.211, 5/1/94]

## Performance Testing

6. If performance testing (air emissions source test) is required by this permit, the permittee shall provide notice of intent to test to DEQ at least 15 days prior to the scheduled test date or shorter time period as approved by DEQ. DEQ may, at its option, have an observer present at any emissions tests conducted on a source. DEQ requests that such testing not be performed on weekends or state holidays.

All performance testing shall be conducted in accordance with the procedures in IDAPA 58.01.01.157. Without prior DEQ approval, any alternative testing is conducted solely at the permittee's risk. If the permittee fails to obtain prior written approval by DEQ for any testing deviations, DEQ may determine that the testing does not satisfy the testing requirements. Therefore, at least 30 days prior to conducting any performance test, the permittee is encouraged to submit a performance test protocol to DEQ for approval. The written protocol shall include a description of the test method(s) to be used, an explanation of any or unusual circumstances regarding the proposed test, and the proposed test schedule for conducting and reporting the test.

Within 30 days following the date in which a performance test required by this permit is concluded, the permittee shall submit to DEQ a performance test report. The written report shall include a description of the process, identification of the test method(s) used, equipment used, all process operating data collected during the test period, and test results, as well as raw test data and associated documentation, including any approved test protocol.

[IDAPA 58.01.01.157, 4/5/00]

## Monitoring and Recordkeeping

7. The permittee shall maintain sufficient records to ensure compliance with all of the terms and conditions of this permit. Records of monitoring information shall include, but not be limited to the following: (a) the date, place, and times of sampling or measurements; (b) the date analyses were performed; (c) the company or entity that performed the analyses; (d) the analytical techniques or methods used; (e) the results of such analyses; and (f) the operating conditions existing at the time of sampling or measurement. All monitoring records and support information shall be retained for a period of at least five years from the date of the monitoring sample, measurement, report, or application. Supporting information includes, but is not limited to, all calibration and maintenance records and all original stripchart recordings for continuous monitoring instrumentation and copies of all reports required by this permit. All records required to be maintained by this permit shall be made available in either hard copy or electronic format to DEQ representatives upon request.

[IDAPA 58.01.01.211, 5/1/94]

AIR QUALITY PERMIT TO CONSTRUCT NUMBER: P-2008.0093		
Permittee:	DF-AP#3 – Double A Dairy	Facility ID No. 053-00018
<b>Location:</b>	Jerome, Idaho	Facility 1D 100. 055-00018

#### **Excess Emissions**

8. The permittee shall comply with the procedures and requirements of IDAPA 58.01.01.130-136 for excess emissions due to startup, shutdown, scheduled maintenance, safety measures, upsets and breakdowns.

[IDAPA 58.01.01.130-136, 4/5/00]

#### Certification

9. All documents submitted to DEQ, including, but not limited to, records, monitoring data, supporting information, requests for confidential treatment, testing reports, or compliance certification shall contain a certification by a responsible official. The certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document(s) are true, accurate, and complete.

[IDAPA 58.01.01.123, 5/1/94]

## False Statements

10. No person shall knowingly make any false statement, representation, or certification in any form, notice, or report required under this permit, or any applicable rule or order in force pursuant thereto.

[IDAPA 58.01.01.125, 3/23/98]

## **Tampering**

11. No person shall knowingly render inaccurate any monitoring device or method required under this permit or any applicable rule or order in force pursuant thereto.

[IDAPA 58.01.01.126, 3/23/98]

## Transferability

12. This permit is transferable in accordance with procedures listed in IDAPA 58.01.01.209.06.

[IDAPA 58.01.01.209.06, 4/11/06]

## Severability

13. The provisions of this permit are severable, and if any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

[IDAPA 58.01.01.322.15.h, 5/1/94; 40 CFR 70.6(a)(5)]